JAN 2 5 2002 (110) Me Joharan, Muthiah

<222>

<223> P=S

(1)...(20)

ISIS4789.ST25.txt SEQUENCE LISTING

```
PADEMAR
        han, Venkatraman
       Cook, Phillip Dan
       Kawasaki, Andrew M.
 <120> Oligonucleotides Having DNA Form and B-DNA Form Confornational Geometry
 <130> ISIS4789
 <140> 09/970,971
 <141> 2001-10-04
 <160> 34
 <170> PatentIn version 3.1
 <210> 1
 <211> 12
 <212> RNA
 <213> Artificial Sequence
 <220>
 <223> Novel Sequence
 <400> 1
                                                                        12
cgcgaauucg cg
 <210> 2
 <211>
       0
 <212>
       DNA
 <213>
       00
 <400> 2
000
 <210>
        3
<211>
        0
 <212> DNA
 <213> 00
<400> 3
000
<210>
 <211>
        20
 <212>
       DNA
 <213> Artificial Sequence
 <220>
 <223> Novel Sequence
<220>
<221> misc_feature <222> (20)..(20)
 <223> 3'-O-MOE
 <220>
 <221> misc_feature
```

<400> atgcat	4 tctg cccccaagga	20
<210> <211> <212> <213>	DNA	
<220> <223>	Novel Sequence	
<222>	misc_feature (19)(20) 3'-O-MOE	
	<pre>misc_feature (1)(20) P=S</pre>	
<400> atgcat	5 tctg cccccaagga	20
<210><211><211><212><213>	6 20 DNA Artificial Sequence	
<220> <223>	Novel Sequence	
<220> <221> <222> <223>	misc_feature (18)(19) P=O	
<220> <221> <222> <223>	misc_feature (1)(17) P=S	
<220> <221> <222> <223>	misc_feature (19)(20) 3'-O-MOE	
<400> 6 atgcattctg ccccaagga 20		
<210> <211> <212> <213>		
<220>		

```
<223> Novel Sequence
<220>
<221> misc_feature <222> (1)..(1)
<223> 3'-O-MOE
<220>
<221> misc_feature
<222> (20)..(20)
<223> 3'-O-MOE
<220>
<221> misc_feature
<222> (1)..(20)
<223> P=S
<400> 7
                                                                                              20
atgcattctg cccccaagga
<210> 8
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Novel Sequence
<220>
<221> misc_feature
<222> (1)..(1)
<223> 3'-O-MOE
<220>
<221> misc_feature
<222> (19)..(20)
<223> 3'-O-MOE
<400> 8
                                                                                              20
atgcattctg cccccaagga
<210> 9
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Novel Sequence
<220>
<221> misc_feature
<222> (1)..(1)
<223> 3'-O-MOE; P=O
<220>
<221> misc_feature <222> (18)..(19)
```

```
<223> P=0
<220>
<221> misc_feature
<222> (19)..(20)
<223> 3'-O-MOE
<220>
<221> misc_feature
<222> (2)..(17)
<223> P=S
<400> 9
                                                                                               20
atgcattctg ccaaaaagga
<210> 10
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Novel Sequence
<220>
<221> misc_feature
<222> (1)..(2)
<223> 3'-O-MOE
<220>
<220>
<221> misc_feature
<222> (19)..(20)
<223> 3'-O-MOE
<220>
<221> misc_feature
<222> (1)..(20)
<223> P=S
<400> 10
                                                                                               20
atgcattctg ccaaaaagga
<210> 11
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Novel Sequence
<220>
<221> misc_feature 
<222> (1)..(2)
<223> 3'-O-MOE; P=O
<220>
<221> misc_feature
```

```
<222> (18)..(20)
<223> P=0
<220>
<221> misc_feature
<222> (19)..(20)
<223> 3'-O-MOE
<220>
<221> misc_feature
<222> (3)..(17)
<223> P=S
<400> 11
                                                                                     20
atgcattctg ccaaaaagga
<210> 12
<211> 12
<212> DNA
<213> Artificial Sequence
<220>
<223> Novel Sequence
<220>
<221> misc_feature <222> (1)..(12)
<223> 3'-O-(2-methyoxyethyl); P=O
<400> 12
                                                                                     12
cgcgaattcg cg
<210> 13
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Novel Sequence
<220>
<221> misc_feature
<222> (1)..(20)
<223> P=S
<400> 13
                                                                                     20
atgcattctg ccccaagga
<210> 14
<211> 11
<212> DNA
<213> Artificial Sequence
<220>
<223> Novel Sequence
<220>
```

	misc_feature (6)(6) 2'-aminolinker	
<400> ggctgu	14 ctgc g	11
<210> <211> <212> <213>	19	
<220> <223>	Novel Sequence	
<222>	misc_feature (16)(19) 3'-O-MOE	
<220> <221> <222> <223>	misc_feature (1)(19) P=0	
<400> 15 ttttttttt ttttttt		
<210> <211> <212> <213>	16 19 DNA Artificial Sequence	
<220> <223>	Novel Sequence	
<220> <221> <222> <223>	misc_feature (16)(19) 3'-O-MOE	
<220> <221> <222> <223>	misc_feature (1)(19) P=0	
<400> ttttt	16 tttt tttttttu	19
<210><211><211><212><213>	17 0 DNA 00	
<400> 000	17	

```
<210> 18
<211> 0
<212> DNA
<213> 00
<400> 18
000
<210> 19
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Novel Sequence
<220>
<221> misc_feature
<222> (1)..(1)
<223> 3'-aminopropyl-A
<220>
<221> misc_feature
<222> (20)..(20)
<223> 3'-aminopropyl-A
<220>
<221> misc_feature
<222> (1)..(20)
<223> P=S
<220>
<221> misc_feature
<222> (4)..(4)
<223> 5-methyl C
<220>
<221> misc_feature <222> (8)..(8)
<223> 5-methyl C
<220>
<221> misc_feature 
<222> (11)..(15)
<223> 5-methyl C
<400> 19
                                                                                                      20
atgcattctg cccccaagga
<210> 20
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Novel Sequence
```

<220>

```
<221> misc_feature
<222> (1)..(1)
<223> 3'-aminopropyl-A
<220>
<221> misc_feature
<222> (5)..(15)
<223> P=S
<220>
<221> misc_feature
<222> (16)..(19)
<223> P=O
<220>
<221> misc_feature
<222> (1)..(4)
<223> P=O
<220>
<221> misc_feature
<222> (20)..(20)
<223> 3'-aminopropyl-A
<220>
<221> misc_feature
<222> (2)..(5)
<223> 2'-O-methoxyethyl substituent
<220>
<221> misc_feature
<222> (4)..(4)
<223> 5-methyl C
<220>
<221> misc_feature
<222> (8)..(8)
<223> 5-methyl C
<220>
<221> misc_feature
<222> (11)...(15)
<223> 5-methyl C
<400> 20
                                                                                                                  20
atgcattctg cccccaagga
<210> 21
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
```

<223> Novel Sequence

```
<400> 21
                                                                               20
tgcatcccc aggccaccat
<210> 22
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Novel Sequence
<400> 22
tgcatcccc aggccaccat
                                                                               20
<210> 23
<211> 18
<212> DNA
<213> Artificial Sequence
<220>
<223> Novel Sequence
<400> 23
                                                                               18
tgcatccccc aggccacc
<210> 24
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Novel Sequence
<220>
<221> misc_feature
<222> (1)..(19)
<223> phosphorothioate linkage
<220>
<221> misc_feature
<222> (4)..(4) <223> 5-methyl C
<220>
<221> misc_feature
<222> (8)..(8)
<223> 5-methyl C
<220>
<221> misc_feature
<222> (11)..(15)
<223> 5-methyl C
<220>
<221> misc_feature
<222> (1)..(6)
<223> 2'-O-(methyoxyethyl)
```

```
<220>
<221> misc_feature
<222> (16)..(20)
<223> 2'-O-(methyoxyethyl)
<400> 24
                                                                                             20
atgcattctg cccccaagga
<210> 25
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Novel Sequence
<220>
<221> misc_feature
<222> (1)..(19)
<223> phosphorothioate linkage
<220>
<221> misc_feature <222> (2)..(4)
<223> 5-methyl C
<220>
<221> misc_feature <222> (8)..(8)
<223> 5-methyl C
<220>
<221> misc_feature
<222> (12)..(12)
<223> 5-methyl C
<220>
<221> misc_feature
<222> (15)..(16)
<223> 5-methyl C
<220>
<221> misc feature
<222> (19)..(19)
<223> 5-methyl C
<400> 25
                                                                                             20
gcccaagctg gcatccgtca
<210> 26
<211> 19
<212> DNA
<213> Artificial Sequence
```

<220>

```
<223> Novel Sequence
<220>
<221> misc_feature <222> (16)..(19)
<223> 2'-modified T
<400> 26
                                                                                 19
tttttttt tttttt
<210> 27
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Novel Sequence
<220>
<221> misc_feature
<222> (1)..(19)
<223> phosphorothioate oligodeoxynucleotide; P=S
<400> 27
                                                                                 20
tccgtcatcg ctcctcaggg
<210> 28
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Novel Sequence
<220>
<221> misc_feature
<222> (1)..(19)
<223> P=S
<400> 28
                                                                                  20
tcagtaatag gcccacatgg
<210> 29
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Novel Sequence
<220>
<221> misc_feature
<222> (1)..(3)
<223> P=0
<220>
<221> misc_feature <222> (4)..(12)
```

P=S: 2'-ME	
$(13)^{-}$. (19)	
	20
19 DNA	
Novel Sequence	
	19
19 DNA	
Novel Sequence	
(1) $\overline{.}$ (4)	
(5)(14)	
misc_feature (15)(18) P=O 2'-MOE/2'-S-Me	
31 tctg ccccaagga	19
32 19 DNA Artificial Sequence	
Novel Sequence	
misc_feature	
	misc feature (13)(19) P=0 29 atcg ctcctcaggg 30 19 DNA Artificial Sequence Novel Sequence 30 atctg ccccaagga 31 19 DNA Artificial Sequence Novel Sequence misc_feature (1)(4) P=0 misc_feature (5)(14) P=S misc_feature (15)(18) P=0 2'-MOE/2'-S-Me 31 atctg ccccaagga 32 19 DNA Artificial Sequence Novel Sequence Novel Sequence

```
<222> (1)..(18)
<223> P=S
<400> 32
                                                                              19
atgcattctg ccccaagga
<210> 33
<211> 19
<212> DNA
<213> Artificial Sequence
<220>
<223> Novel Sequence
<220>
<221> misc_feature
<222> (1)..(1)
<223> P=O 2'-5' linkage with 3'-O-MOE; 2'-O-MOE/2'-S-ME/2'-O-MOE
<220>
<221> misc_feature
<222> (2)..(4)
<223> P=0
<220>
<221> misc_feature
<222> (5)..(14)
<223> P=S
<220>
<221> misc_feature
<222> (15)..(17)
<223> P=0
<220>
<221> misc_feature
<222> (18)..(18)
<223> P=O 2'-5' linkage with 3'-O-MOE
<400> 33
                                                                              19
atgcattctg ccccaagga
<210> 34
<211> 19
<212> DNA
<213> Artificial Sequence
<220>
<223> Novel Sequence
<220>
<221> misc_feature
<222>
       (1)..(1)
<223> P=S 2'-5' linkage with 3'-O-MOE; 2'-O-MOE/2'-S-ME/2'-O-MOE
<220>
```

```
<221> misc_feature
<222> (2)..(17)
<223> P=S

<220>
<221> misc_feature
<222> (18)..(18)
<223> P=S 2'-5' linkage with 3'-O-MOE

<400> 34
atgcattctg ccccaagga
```

, •

19